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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/874,355      | 06/06/2001  | Tomonari Sendai      | Q64810              | 2938             |

7590 03/16/2005

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| EXAMINER |
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SHAW, SHAWNA JEANNINE

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| ART UNIT | PAPER NUMBER |
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3737

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/874,355

Applicant(s)

SENDAI, TOMONARI

Examiner

Shawna J. Shaw

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06062001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 12/27/2004 have been fully considered but they are not fully persuasive.

The examiner contends that the pseudocolor data of Wang et al. in [0075] denote *both* tissue-form ("contour lines" to highlight areas to be targeted for biopsy) and tissue-state (probability of dysplasia). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a combined image produced by independently controlling the color and brightness, and non-compensation of shadows) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2. Applicant's arguments with respect to claims 1-46 have been considered but are moot in view of the new ground(s) of rejection.

### ***Priority***

3. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

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USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/138,527. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are an obvious combination/grouping of one another wherein: luminosity corresponds to brightness, statistical quantity corresponds to ratio, gain corresponds to coefficient, the illumination means includes GaN type lasers, and the dynamic range expanding means includes bit shifting.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Claim Interpretation***

For examination purposes, the examiner interprets "tissue-state" images as visually portraying the probability of tissue being normal or diseased, and "tissue-form" images as visually portraying tissue structure (e.g., polyp size, lesion diameter, etc.).

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 9-11, 18, 19, 29, 32, 33, 44 and 45 are rejected under 35

U.S.C. 102(e) as being anticipated by Wang et al. of record.

Regarding claims 1, 2, 18, 19, 29 and 30, Wang et al. disclose a method for obtaining a computed, or ratioed, fluorescent light image and assigning color thereto to form a tissue-state (probability of dysplasia) and tissue-form ("contour lines" to highlight areas to be targeted for biopsy) image [0075] (see also fig. 9 and 10 and [0105] regarding fluorescence images conveying additional tissue-form information).

Regarding claims 9-11, 32, 33, 44 and 45, Wang et al. disclose assigning one of color and brightness to the reflected image and forming an overlaid (inherently matching the number of pixels) fluorescence and reflectance image [0128-29], [0132-33].

6. Claims 1, 2, 7-11, 16-19, 27, 28, 31-33, 42, 43, 45 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsujita et al. (2002/0138008).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Tsujita et al. disclose a method for: obtaining a fluorescent light image and assigning color thereto based on the intensity to form a tissue-state image; obtaining a reflectance image and assigning luminance (brightness) and chrominance data thereto to form a tissue-form image [0198] and displaying a composite image. Tsujita et al. further disclose computing a ratio (statistical quantity) between a fluorescent image and another fluorescent image or the reflectance image [0198]. Tsujita et al. further disclose a GaN type semiconductor laser [0036].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6, 12-15, 20-23, 25, 26, 35-38, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. of record or Tsujita et al. (2002/0138008) in view of Kaneko et al. of record.

Regarding claims 3-6, 12-15, 20-23, 25, 26, 35-38, 40 and 41, Wang et al. and Tsujita et al. do not *explicitly* address assigning display gradation based on a statistical quantity. In the same field of endeavor, Kaneko et al. teaches that it is known to assign display gradation based on the maximum value and frequency (histogram) of the brightness levels of the image signals (col. 17 lines 3-20) to indicate normal or non-normal tissue. Kaneko further discloses using color discrimination scales and LUTs (inherently composed of a plurality of multiplication factors, or coefficients). See col. 16

lines 21-29. Further regarding claims 24 and 39, it is inherent that that computation circuit (141) of Kaneko processes data converted from the CCD in the form of 8 bits or less. It would have been obvious at the time the invention was made to a person of ordinary skill in the art to assign the display gradation of Wang et al. or Tsujita et al. based on statistical quantities, or histograms, of the image signals as demonstrated by Kaneko et al. to eliminate artifacts and provide enhanced visual discrimination between normal and diseased tissues and as is known in the art.

8. Claims 7, 16, 27 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Kaneko et al. and further in view of Zeng et al. as applied in paper number 08262004.

9. Claims 31 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Kaneko et al. and further in view of Hayashi et al. as applied in paper number 08262004.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawna J. Shaw whose telephone number is (571) 272-4743. The examiner can normally be reached on 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shawna J. Shaw  
Primary Examiner  
Art Unit: 3737  
03/10/2005